

Navy Environmental Quality Fact Sheet



Do you degrease precision components such as bearings and electromechanical instruments?

Would you like to improve this process in the following areas?

- **Meeting environmental compliance regulations** -- Reduce hazardous waste disposal and air emissions. Applicable regulatory areas include RCRA and VOC NAAQS.
- **Improving workers' safety and health** -- Reduce exposure to harmful solvents.
- **Increasing productivity** -- Reduce cleaning time up to 60% and maintenance labor hours by 50%.
- **Saving money** -- Decrease operational costs, solvent purchases and solvent disposal.



IPA/Cyclohexane vapor degreaser

*The use of hazardous solvents to clean, degrease, and dry small precision instrument bearings can have many adverse environmental effects including hazardous waste generation and air emissions. An automated vapor degreaser can be used to reduce solvent use with less labor. The technology removes oil, grease, dirt, and solvent residue using isopropyl alcohol and cyclohexane. The system is explosion proof and contains an automatic fire suppression system. The vapor degreaser has been tested successfully at NAS North Island. **This equipment is available through the Navy Pollution Prevention Equipment Program.***

How can you achieve these improvements?

Implement Isopropyl Alcohol (IPA)/Cyclohexane Vapor Degreaser Equipment.

How does this equipment work?

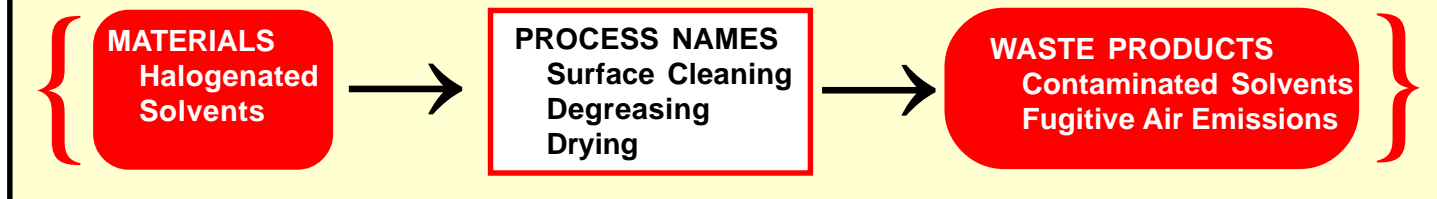
The vapor degreaser removes oil, grease and dirt in an automated, self-contained system using isopropyl alcohol and cyclohexane solvent.

How will this equipment save you money?

The vapor degreaser reduces labor, solvent purchases and disposal. The typical cost to implement is \$116,000 and pays for itself within eight months.



Typical Process Flow Diagram



How can this technology system eliminate or reduce pollution?

When implemented, this technology can eliminate the use of harmful solvents. Implementation will result in the following pollution reductions:

- 98% Reduction of Waste Solvent Disposal as Hazardous Waste
- Elimination of Air Emissions Related to Solvent Use
- Reduction of Maintenance Labor Hours by 50%
- Reduction of Precision Bearing Cleaning Labor by up to 60%

Which shops can benefit most from this technology?

This technology can be used in operations that require the cleaning, degreasing, and drying of small precision components such as bearings and gyroscopic equipment.

Take action: How can you implement this technology?

- **Activity Shop & Work Center Personnel.** If you work at an activity, contact your Pollution Prevention Program Manager. The P2 Program Manager can provide more information and conduct a more detailed analysis, and may be able to provide this equipment at no cost to a Shop or Work Center.

- **Activity Pollution Prevention Manager.** Request funding and installation assistance for this technology through the Navy P2 Equipment Program. Depending on the application, the Environmental Requirements Cookbook may contain project submission information for annual budget submissions to your major claimant.

- **For Additional Technical Information.** More information about this technology can be found in the PPEP Equipment Book (**Web:** <http://www.lakehurst.navy.mil/p2/index.htm>), which is contained in the Joint Service P2 Technical Library. (**Web:** <http://www.nfesc.navy.mil/>).

Achieving Environmental Compliance Through Pollution Prevention

Everyday the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by implementing pollution prevention technologies and methods to reduce compliance requirements. This Fact Sheet is one in a series designed to encourage activities to implement pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

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